Book Review on the AU-NEPAD African Innovation Outlook

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AU-NEPAD (Africa Union-New Partnership for African Development), African Innovation Outlook 2010, Pretoria: AU-NEPAD, 2010: pages 166; ISBN: 978-1-920550-45-5.

The "African Innovation Outlook" is the first of its kind in Africa. Although it is called the African Innovation outlook, the data on investment in research and innovation includes only 19 states. 35 states' data are still to be surveyed, identified, evaluated, recorded and published. Hard data on African research and innovation are not easy to excavate and build. Considering the paucity of such data, the very fact that an African innovation outlook is generated is something very positive. It opens a way of how to go about and build further and accessible hard data that is likely to inform policy learning for stimulating science, technology and innovation development in Africa. The contributors are local resources that received training

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to collect and process data. A system of mentorship has been established to those in the 19 states that are included. And the mentors were science, technology and innovation experts from NEPAD, IDRC, UNU-MERIT, Lund, IERI, and UN-Habitat and a variety of other resource persons. Workshops and conferences were also used. Experts from North and South brought their knowledge and skills to generate the report that was finally launched in June 2011 in Addis Ababa at ECA. The funding for this effort was provided by Swedish Development Agency SIDA. And it was given to NEPAD. The outlook is thus an AU-NEPAD product funded as a project by SIDA. Some IDRC involvement is also recognised in the acknowledgement. There is one error, one of the acknowledged Dr. Tekalign is a he, but he is reported in terms of 'her.'

What is the African Innovation Outlook (AIO) then? The AIO 'presents R & D and innovation indicators on the basis of the surveys conducted by the national Focal Points" (p.8). It provides information on science, technology and innovation activities in Africa. Fred Gault said that the outlook is a good source of data providing indicators to monitor investments in science, technology and innovation by governments, businesses, development partners and civil society including the evaluation of public spending programmes (ibid.). The indicators can also be used for benchmarking and strategic planning (pp. 8-9). The benchmarking is relevant in showing, for example, how much progress has been accomplished by the African Union's pledge to spend 1 % of GDP on R & D. The gross domestic expenditure on research and development (GERD) can be a benchmark indicator for evaluating whether states are meeting the AU target. STI indicators for strategic planning can support foresight visioning and charting the trajectory for STI relevance in development (ibid).

The AIO has six chapters. The first chapter sets the context including the processes that culminated in the production of the Outlook itself. The objectives, the scope, the roles and structures of the focal groups from the selected states where surveys were conducted were explored. There was also an attempt to describe the real 'essence' of the Outlook (p. 9).

Chapter 2 uses the national system of innovation (NSI) approach with a development perspective by trying to excavate the structural impediments to African economic growth and human resource development (p.9). It addresses all relevant macro-level issues such as weaknesses in institutions and others such as demographics, economic sectors, diversity, growth and development, entrepreneurships, global competitiveness, industrialisation, the macro-economic environment, regional integration, STI institutions and policies and MDGs (ibid.).

Chapter 3 is the real chapter that summarises the outcomes of R & D surveys conducted in Cameroon, Gabon, Ghana, Kenya, Mali, Malawi,

Mozambique, Nigeria, Senegal, South Africa, Tanzania, Uganda and Zambia. Indicators used were R & D both by source and sector of performance, and R & D personnel by social considerations and characteristics. The shortcomings in carrying out the existing survey and learning how to improve the next were presented. There were other states that have been included but they did not provide R & D data for inclusion.

Chapter 4 discusses how innovation is defined, what it means with a perspective of how it can be measured statistically. In addition the first surveys of selected countries are examined.

Chapter 5 explores statistical data from the Scopus by presenting a bibiliometric analysis of scientific output from the 19 states that joined this experimental research in the innovation outlook. Bibiliometric study of scientific results shows that medical research is ahead of agricultural research. In general Africa's standing in world wide publications remain lower than the other continents in the world.

Broader factors such a colonial legacies, how science is organised in different states and the infrastructure such as physical and material in the states under study, and the issues in food security, disease control and industrialisation have been addressed.

The final chapter draws an anticipatory overview of how the next steps by the African Science, Technology and Innovation Indicators Initiative (ASTII) will be in addressing the science, technology and innovation challenges in Africa,

R & D intensity for a large number of the states included is between 0.20% and 0.48% of their GDP. Only South Africa spends the highest resources on R & D, 8 times more than Nigeria, and 30% higher than Malawi. Sources for R & D funding are varied. Over 50 % of Mozambique's funding comes from donors. Ghana's R & D sources come mainly from the business sector, less from donors. Uganda, Zambia and Senegal enjoy only 5 % contribution to R & D from the business sector.

Data from UNICCO's Institutes of statistics gives a different figure on R & D expenditure, putting it at 0.3 % of the GDP for African countries in the south of the Sahara with the exception of South Africa.

South Africa also claims its R & D expenditure is less than 1% in the period that the Innovation outlook reports as 1% in 2007.

These discrepancies may have to do with reliance on different sources. It appears when it comes to health; the USAID has invested billions for HIV/AIDS. This may also distort real figures in R & D spent by the countries where aids are reported heavily such as Malawi.

The main critique of this innovation outlook is whether it is relevant to develop different types of science, technology and innovation indicators by taking into consideration the specific African context. This appears to be an

important matter in redefining all the concepts on innovation to reflect the context and conditions in Africa.

It will be also useful to sustain this effort and this requires strong local buy-in that is necessary to sustain and maintain this activity annually or once in two years, not once in five years or when there is a donor benefactor that is likely to fund this initiative. An African Observatory for Science, Technology and Innovation has been established in Equatorial Guinea. If funding from this oil rich country is provided, the survey can be sustained, and the opportunity for more and better accurate data can take place. This is a good starting point, but there is a need for more surveys to open, expand and sustain the production of accurate data to help Africa's overall economic transformation.